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managed by Brookhaven Science Associates
for the U.S. Department of Energy

Mr. Brian Jankauskas
New York State Dept. of Environmental Conservation
Division of Environmental Remediation
625 Broadway – 12th Floor
New York, New York 12233-7051

June 4, 2021

Ms. Sharon Hartzell
Federal Facilities Section
U.S. EPA – Region II
290 Broadway – 18th Floor
New York, New York 10007-1866

Dear Mr. Jankauskas and Ms. Hartzell:

**SUBJECT: BROOKHAVEN NATIONAL LABORATORY (BNL) INTERAGENCY
AGREEMENT (IAG) – MONTHLY REPORT FOR MAY 2021**

In accordance with the Interagency Agreement (IAG) for Brookhaven National Laboratory (BNL), enclosed is the Monthly Report for May 2021 covering the Long-term Stewardship (LTS) areas listed below:

- Brookhaven Graphite Research Reactor (BGRR) Surveillance and Maintenance
- High Flux Beam Reactor (HFBR), including the Waste Loading Area (WLA) Surveillance and Maintenance
- Soil and Water Remediation

If you have any questions, please call Gerald Granzen at (631) 344-4089.

Sincerely,

Robert F. Howe for WD

William Dorsch, Manager
Groundwater Protection Group

Enclosure, as stated:
cc: w/encl.

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**Brookhaven National Laboratory
Interagency Agreement (IAG) Monthly Report
May 2021
Long Term Stewardship (LTS) Activities**

**BROOKHAVEN GRAPHITE RESEARCH REACTOR (BGRR) SURVEILLANCE AND
MAINTENANCE**

Current Month Technical Performance Analysis

Accomplishments and/or Technical Achievements

- Conducted routine surveillance and maintenance (S&M) activities.
- The annual inspection of the below ground ducts originally scheduled for May was postponed to June due to heavy rain.

Highlights of any changes to objectives and description of any changes in technical approach

- None.

Key Issues

- None.

Planned Actions for the Next 90 Days

- Continue S&M activities.
- The annual inspection of the below ground ducts is rescheduled for 6/2/21. A new leak detection sensor in the south duct will be installed on a follow up entry later in June.

**HIGH FLUX BEAM REACTOR (HFBR) INCLUDING, STACK, GROUNDS, AND WASTE
LOADING AREA (WLA) SURVEILLANCE AND MAINTENANCE**

Current Month Technical Performance Analysis

Accomplishments and/or Technical Achievements

- BSA and BHSO participated in the weekly stack demolition coordination teleconferences with the Army Corps of Engineers (USACE) and DOE's Office of Environmental Management (EM).
- The USACE and contractor briefed the regulators on the status of the stack demolition during the 5/6/21 IAG monthly teleconference. The Community Advisory Council (CAC) was also briefed 5/13/21.
- Contractor removed footer "A" located beneath the connection of the former silencer and the plenum. Additional soil removal near footer "B" was performed.
- The second waste shipment left BNL via rail 5/22/21 for Waste Control Specialists in Texas and 13 empty intermodal containers were delivered to BNL.

- Community Air Monitoring Plan (CAMP) air monitoring data was distributed to the regulators weekly.
- The quarterly routine surveillance of the HFBR confinement dome and outside areas was completed on 5/6/21. No significant deficiencies were identified during the inspection.

Highlights of any changes to objectives and description of any changes in technical approach

- Concrete cores taken from the pedestal indicate that rad impacts are present up to six inches beneath the surface. An alternate concrete removal method to scabbling is being planned using a diamond wire saw.

Key Issues

- A briefing for the regulators on the status of stack demolition field work and planned schedule extension was held 5/25/21.
- Continue to perform the remaining demolition work safely.

Planned Actions for the Next 90 Days

- Continue S&M activities.
- DOE EM to submit a schedule extension for submittal of the stack Closeout Report to the regulators.
- Contractor to use a diamond wire saw to slice off the upper portion of the stack pedestal followed by radiological sampling.
- Contractor to complete soil excavation of the former silencer area and perform a final status survey (walkover survey and soil sampling). Oak Ridge Institute for Science and Education (ORISE) will then perform independent verification surveys of the stack area.
- BSA to revise the stack demolition radiological air monitoring summary and resubmit to the regulators.
- DOE EM-3 to conduct site visit of the stack and Building 650 demolition 6/2/21.

SOIL AND WATER REMEDIATION

Current Month Technical Performance Analysis

Accomplishments and/or Technical Achievements:

- The IAG monthly teleconference was held 5/6/21 and included updates on Building 650 and HFBR stack demolition.
- The CAC meeting was held 5/13/21 and included brief administrative updates on the stack and Building 650 demolition, status of carbon filters for potable well 10, and PFAS Time Critical Removal Action (TCRA).
- Technical editor review of the draft 2021 CERCLA Five-Year Review Report is complete, and the report is undergoing final review/revision prior to distribution to the regulators.
- Completed internal review and revision of the 2020 Groundwater Status Report. Briefed BSA Environment, Safety and Health Manager and BHSO on 5/27/21 and 6/2/21, respectively.
- Based on EPA comments, submitted the revised area of concern (AOC)/operable unit (OU) justification to the regulators 5/4/21.

- Preparing responses to NYSDEC comments received 5/6/21 on the PFAS Phase 4 Characterization Report.
- Work continued on the Phase 5 PFAS characterization and planned remediation including:
 - Procurement and Property Management (PPM) Division issued the invitation for bids for construction of the PFAS Source Area Groundwater Remediation Systems on 5/11/21. A pre-bid walkthrough was held on 5/18/21.
 - Completed BSA and BHSO review and revision of the TCRA Design Report and Action Memorandum.
 - Additional temporary wells were installed to better define the west boundary of the current firehouse PFAS plume at West Princeton Avenue.
- Well drilling contractor completed the installation and sampling of one additional vertical profile well at OUVI Ethylene Dibromide (EDB) in support of groundwater modeling work.
- Due to electrical power issues at Building 855, the BGRR Sr-90 treatment system was temporarily shut down, then restarted.
- The North Street East EDB project control system issue that was causing intermittent system shutdowns was addressed by the BSA electrician. The controls contractor will update the programming on this system.
- The well drilling contractor installed a new pump on the Western South Boundary extraction well WSB-5, and the well was restarted.

Highlights of any changes to objectives and description of any changes in technical approach

- None.

Key Issues

- The Laboratory continued COVID-Phase 2 operations. The Groundwater Protection Group (GPG) maintained minimal staff working on-site to manage field activities. All other GPG staff continue to work remotely.
- The data from the installation and sampling of the vertical profile wells at the OUVI EDB project indicates the EDB plume is deeper than previously detected in the vicinity of extraction wells EW-1 and EW-2.

Planned Actions for the Next 90 Days

- The Laboratory and GPG will continue COVID-Phase 2 operations.
- The monthly IAG teleconference is scheduled for 6/3/21 and will include updates on HFBR stack demolition, Building 650 demolition and the PFAS TCRA.
- Submit the Five Year Review Report and the 2020 Groundwater Status Report to the regulators in June.
- Submit the PFAS Source Area Groundwater Treatment Systems Design Report and TCRA Action Memorandum to the regulators in June.
- Continue procurement activities for construction of the PFAS source area groundwater treatment systems. Bids are due 6/7/21 and field work is expected to start in July.
- Install the carbon vessels in Building 492 for the planned Current Firehouse PFAS groundwater treatment system.
- Submit responses to NYSDEC comments on the Phase 4 characterization report to the regulators. Prepare revision to the Phase 4 characterization report.

- Prepare revision of the TCRA PFAS characterization report to incorporate data from the six additional temporary wells installed along Princeton Avenue.
- Complete repairs to the roof of the Building 96 Treatment System extraction well RTW-1 well-house.